

Claims

- 5 1. Process for the production of monolithic porous mouldings which completely fill their gelling mould, characterised by the following process steps:
- a) provision of a gelling mould;
 - b) activation of the gelling mould by surface etching, increasing the surface area and/or chemical modification;
 - 10 c) filling of the gelling mould with monomer sol;
 - d) polymerisation of the monomer sol and ageing of the resultant gel for the formation of pores.
- 15 2. Process according to Claim 1, characterised in that a gelling mould made from glass, glass-coated stainless steel or fused silica is provided in step a).
- 20 3. Process according to Claim 1 or 2, characterised in that the activation in step b) is carried out by increasing the inside surface area of the gelling mould by treating the inside surface with alkoxysilanes and/or organo-alkoxysilanes or slurries of particles.
- 25 4. Process according to one or more of Claims 1 to 3, characterised in that the activation in step b) is carried out by chemical modification of the inside surface of the gelling mould by treating the surface with bifunctional reagents.
- 30 5. Process according to one or more of Claims 1 to 4, characterised in that a sol-gel process is used for the production of the monolithic porous mouldings.

6. Process according to one or more of Claims 1 to 5, characterised in that a monomer sol which exhibits low shrinkage rates through the addition of particles, fibres and/or use of organoalkoxysilanes is used in step c).

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7. Monolithic porous mouldings which have been polymerised into their gelling mould, obtainable by the process corresponding to one or more of Claims 1 to 6.

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8. Use of the mouldings according to Claim 7 for the chromatographic separation of at least two substances.

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